

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Uncomplicating Diabetes: Reducing the Burden of Diabetes-Related End-Organ Injury (J7)

Scientific Organizers: Mark E. Cooper, Thomas M. Coffman, Matthias G. von Herrath and Susan Quaggin

Sponsored by Novo Nordisk A/S

Vascular Biology and Human Diseases: From Molecular Pathways to Novel Therapeutics (J8)

Scientific Organizers: Elisabetta Dejana, Anne C. Eichmann and Gavin O. Thurston

February 25-March 1, 2018 • Eldorado Hotel & Spa • Santa Fe, New Mexico, USA

Supported by the Directors' Fund

Abstract & Scholarship Deadline: October 25, 2017 / Abstract Deadline: November 28, 2017 / Discounted Registration Deadline: December 20, 2017

SUNDAY, FEBRUARY 25

Arrival and Registration

MONDAY, FEBRUARY 26

Welcome and Keynote Address (J7)

Steven E. Kahn, VA Puget Sound Health Care System and University of Washington, USA
Current Management of Type 2 Diabetes

Welcome and Keynote Address (J8)

Kari K. Alitalo, University of Helsinki, Finland
Therapeutical Potential of Vascular Growth Factors

New Treatments in Diabetes (J7)

Daniel J. Drucker, Lunenfeld-Tanenbaum Research Institute, Canada
GLP-1-Mediated Reduction in Complications of Diabetes

Volker Vallon, University of California, San Diego, USA
SGLT2 Inhibition – Experimental

David Cherney, University of Toronto, Canada
SGLT2 Inhibition – Renal Effects in Man

Short Talk(s) Chosen from Abstracts

Vascular Growth Factors: Biological Relevance and Therapeutic Application (J8)

Michael Simons, Yale University, USA
The Multiple Roles of Fibroblast Growth Factors

Lena Claesson-Welsh, Uppsala University, Sweden
Phosphatases in Vascular Permeability and Angiogenesis

Shahin Rafii, Weill Cornell Medical College, USA
Angiocrine Functions of Endothelial Cells

Short Talk(s) Chosen from Abstracts

Lipids and Diabetic Complications (J7)

Svati H. Shah, Duke University Medical Center, USA
What Can We Learn from Lipidomics?

Katalin Susztak, University of Pennsylvania, USA
Lipids and Renal Tubular Injury in Diabetes

Weier Qi, AstraZeneca, Sweden
Novel Target to Promote Glycolytic Flux and Mitochondrial Functions in Diabetic Kidney diseases

Short Talk Chosen from Abstracts

Vascular Growth Factors: Receptors and Biological Role (J8)

Gou Young Koh, Institute of Basic Science, South Korea
Vascular Protection by Tie2 Activation

Gavin O. Thurston, Regeneron Pharmaceuticals Inc., USA
Endothelial Heterogeneity and Response to Anti-Vascular Therapy

Luisa Iruela-Arispe, University of California, Los Angeles, USA
Critical Signaling Nodes in Vascular Homeostasis

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 27

Endothelial Metabolism and Neurovascular Crosstalk (Joint)

Peter F. Carmeliet, University of Leuven, VIB, Belgium
Endothelial Cell Metabolism and Therapeutic Interventions

Susan Quaggin, Northwestern University, USA
Therapies on the Horizon of Diabetic Kidney Disease

Anne C. Eichmann, Yale University School of Medicine, USA
Neurovascular Cross Talk and Possible Pathological Implications

David L. Silver, Duke-NUS Medical School, Singapore
Brain Lipid Transport

Short Talk(s) Chosen from Abstracts

Mitochondria and Diabetic Complications (J7)

Richard J. Youle, NINDS, National Institutes of Health, USA
General Overview on Mito Maven

Chengxue Helena Qin, Baker IDI Heart and Diabetes Institute, Australia
Role of Endogenous Annexin-A1 in the Cardiovascular Response to Diabetes

Farhad Danesh, MD Anderson, USA
Mitochondrial Reprogramming in Diabetic Nephropathy

Short Talk Chosen from Abstracts

Regulation of Endothelial Cell Differentiation in Development and Tissue Regeneration (J8)

Didier Y. R. Stainier, Max Planck Institute for Heart and Lung Research, Germany
Vascular Development in Zebrafish

Taija Mäkinen, Uppsala University, Sweden
Organ-Specific Lymphatic Endothelial Cell Progenitors

Hellmut G. Augustin, German Cancer Research Center (DKFZ) & University of Heidelberg, Germany
Epigenetic Regulation of Endothelial Cell Differentiation

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 28

Genomics and Epigenomics in Diabetic Complications (J7)

Eske Willerslev, University of Copenhagen, Denmark
What We Can Learn from State of the Art Genomics?

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Mark I. McCarthy, University of Oxford, UK
Using Human Genetics for Biological Insight and Translational Advantage

Thomas M. Coffman, NUS Duke Singapore, Singapore
Genetic Mechanisms of Diabetic Kidney Disease in Mouse Models

Assam El-Osta, Bakeridi Heart Research Institute, Australia
Epigenetics of Diabetes and its Complications. Beyond Epiphenomenon?

Short Talk(s) Chosen from Abstracts

Molecular Basis of Vascular Diversity (J8)

Ralf H. Adams, Max Planck Institute for Molecular Biomedicine, Germany
Functional Heterogeneity of Blood Vessels in the Skeletal System

Costantino Iadecola, Weill Cornell Medicine, USA
The Diversity of Brain Microcirculation

Britta Engelhardt, Theodor Kocher Institute/Universitat Bern, Switzerland
Specialized Brain Barriers Establish the Immune Privilege of the CNS

Stefan Liebner, Klinikum der Johann Wolfgang Goethe-Universität, Germany
Regulation of Vascular Barrier Heterogeneity in the CNS

Short Talk(s) Chosen from Abstracts

Oxidative Stress and Diabetic Complications (J7)

Patrick J. Pagano, University of Pittsburgh, USA
ROS in Vascular Phenotypic Switching and Disease, Target Nox!

Harald Schmidt, Maastricht University, Netherlands
Dysfunctional ROS-cGMP as a Common Mechanism of Diabetic Vasculopathy in Systems Medicine

Kumar Sharma, University of California, San Diego, USA
Mitochondrial ROS: Friend or Foe?

Short Talk Chosen from Abstracts

Brain Vascular Pathology (J8)

Christer Betsholtz, Uppsala University, Sweden
The Establishment and Dysfunction of the Blood Brain Barrier

Elisabetta Dejana, Uppsala University, Sweden
Genetic Vascular Malformations in the Brain

Berislav Zlokovic, University of Southern California, USA
Vascular Contribution to Alzheimer's Disease

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, MARCH 1

Inflammation, the Vasculature and Diabetic Complications (Joint)

Speaker to be Announced

Andrew J. Murphy, Baker Heart Research Institute, Australia
Hematopoietic Progenitor Cells in Diabetic Complications

Lois E H Smith, Boston Children's Hospital/ Harvard Medical School, USA
Glucose and Lipid Metabolism in Retinopathy

Israel F. Charo, ChemoCentryx, Inc., USA
MCP-1 as a Target for Diabetic Complications

Short Talk(s) Chosen from Abstracts

Vasoactive Hormones in Diabetic Complications (J7)

Ariela Benigni, IRCCS - Istituto di Ricerche Farmacologiche Mario Negri, Italy
Regeneration of Kidney Vasculature by Angiotensin II Antagonism: New Insights

Susan Gurley, Duke University, USA
Angiotensin II: Tissue Selective Effects

Merlin Thomas, Monash University, Australia
Novel Interactions of RAGE with GPCR Receptors

Hemodynamics and Endothelial Pathology (J8)

Martin Schwartz, Yale School of Medicine, USA
Fluid Shear Stress and Vascular Diseases

Naoki Mochizuki, National Cerebral and Cardiovascular Center Research Institute, Japan
The Vascular Cell Response to Flow

Tatiana V. Petrova, CHUV and University of Lausanne, Switzerland
Endothelial Cell Responses to Biomechanical Forces in Lymphatics

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J7)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J8)

FRIDAY, MARCH 2

Departure